

[REDACTED]

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION

**TQ DELTA, LLC,**

*Plaintiff,*

v.

**COMMSCOPE HOLDING COMPANY, INC.,  
COMMSCOPE INC., ARRIS US HOLDINGS,  
INC., ARRIS SOLUTIONS, INC., ARRIS  
TECHNOLOGY, INC., and ARRIS  
ENTERPRISES, LLC**

*Defendants.*

CIV. A. NO. 2:21-CV-00310-JRG

[REDACTED]

---

**COMMSCOPE'S MOTION FOR SUMMARY JUDGMENT  
OF NON-INFRINGEMENT OF THE FAMILY 3 PATENTS**

## TABLE OF CONTENTS

I.	INTRODUCTION .....	1
II.	STATEMENT OF ISSUES TO BE DECIDED BY THE COURT .....	1
III.	LEGAL STANDARD .....	1
IV.	STATEMENT OF UNDISPUTED MATERIAL FACTS (“SUMF”).....	2
V.	ARGUMENT .....	2
A.	It Is Undisputed That TQ Delta Points to the “max_delay_octet” Message Field, Which Discloses a Minimum Number of Bytes Required by the Deinterleaver Rather Than a Maximum Number of Bytes That Can Be Allocated to the Deinterleaver.....	3
1.	TQ Delta admits that the max_delay_octet field corresponds to a minimum number of bytes required by the deinterleaver. ....	3
2.	Third-party testimony supports the undisputed fact that the max_delay_octet field discloses a minimum number of bytes required by the deinterleaver. ....	5
3.	CommScope’s testimony supports that the max_delay_octet field discloses a minimum number of bytes required by the deinterleaver. ....	6
B.	A Message That Specifies a Minimum Is Not the Same as a Message That Specifies a Maximum. ....	6
VI.	CONCLUSION .....	7

**TABLE OF AUTHORITIES**

	<b>Page(s)</b>
<b>Cases</b>	
<i>Kraft Foods, Inc. v. Int'l Trading Co.</i> , 203 F.3d 1362 (Fed. Cir. 2000).....	1
<i>PSN Illinois, LLC v. Ivoclar Vivadent, Inc.</i> , 525 F.3d 1159 (Fed. Cir. 2008).....	1

**TABLE OF EXHIBITS**

<b>Exhibit No.</b>	<b>Description</b>
Ex. A	Excerpt of Dkt. No. 172, Markman Transcript, dated June 1, 2022
Ex. B	Excerpt of U.S. Patent No. 7,844,882 (“882 Patent”)
Ex. C	Excerpt of U.S. Patent No. 8,276,048 (“048 Patent”)
Ex. D	Excerpt of Cooklev Opening Report, dated August 29, 2022
Ex. E	Excerpt of ITU-T G.993.2 Standard “Very high speed digital subscriber line transceivers 2 (VDSL2)”
Ex. F	Excerpt of Yu Deposition, dated August 24, 2022
Ex. G	Excerpt of Cassiers Deposition, dated August 25, 2022
Ex. H	Excerpt of Ransom Rebuttal Report, dated November 18, 2022



## **I. INTRODUCTION**

Each Family 3 Asserted Claim requires a message “specifying a maximum number of bytes of memory that are available to be allocated to a deinterleaver.” But the undisputed evidence shows that the message identified by TQ Delta specifies the opposite of what is required by the claims—the *minimum* number of bytes of memory required by the deinterleaver. As TQ Delta represented during the Markman hearing, “pointing to something that says ‘minimum’ and doesn’t have anything to do with ‘maximum’” puts TQ Delta “in a bad position.” Ex. A at 88:15–22. Because there is no message “specifying a maximum number of bytes of memory that are available to be allocated to a deinterleaver,” summary judgment is warranted.

Thus, CommScope respectfully requests that this Court grant a motion for summary judgment of non-infringement of claim 13 of U.S. Patent No. 7,844,882 and claim 5 of U.S. Patent No. 8,276,048 (collectively, the “Family 3 Asserted Claims”).

## **II. STATEMENT OF ISSUES TO BE DECIDED BY THE COURT**

Whether CommScope is entitled to summary judgment of non-infringement of the Family 3 Asserted Claims because TQ Delta identified a message that indicates only a *minimum* number of bytes of memory required by the deinterleaver, rather than a message that specifies a *maximum* number of bytes of memory that are available to be allocated to a deinterleaver as required by the Family 3 Asserted Claims.

## **III. LEGAL STANDARD**

If a patentee fails to show that even a single claim limitation infringes, it “is sufficient to negate infringement.” *Laitram Corp. v. Rexnord, Inc.*, 939 F.2d 1533, 1535 (Fed. Cir. 1991). When a patentee fails to show that the accused products infringe the asserted claims, “a trial court may appropriately enter summary judgment. *Id.* (citing *PSN Illinois, LLC v. Ivoclar Vivadent, Inc.*, 525 F.3d 1159, 1166-68 (Fed. Cir. 2008)).

#### IV. STATEMENT OF UNDISPUTED MATERIAL FACTS (“SUMF”)

1. The limitation “a maximum number of bytes of memory that are available to be allocated to a deinterleaver” appears in both Family 3 Asserted Claims. Ex. B (’882 Patent) at 12:21–23; Ex. C (’048 Patent) at 11:7–9.

2. In the Claim Construction Memorandum and Order, this Court construed this term to have its “plain meaning” and noted that the claim “recites that the ‘message’ specifies the maximum number of bytes.” Dkt. No. 169 at 58–59.

3. TQ Delta accuses the `max_delay_octet` field within the O-PMS message of specifying “a maximum number of bytes of memory that are available to be allocated to a deinterleaver.” Ex. D (Cooklev Opening Rep.) ¶¶ 1178–79, 1201.

4. The `max_delay_octet` field within the O-PMS message, which specifies a delay as opposed to an amount of memory to be allocated, corresponds to the “minimum amount of memory required in a transceiver.” Ex. D ¶ 207.

#### V. ARGUMENT

No reasonable jury could conclude that the accused CommScope products transmit or receive “a message during initialization specifying a maximum number of bytes of memory that are available to be allocated to a deinterleaver” because the message relied on by TQ Delta does the *opposite*—the message specifies a *minimum* number of bytes of memory available to be allocated to a deinterleaver.

At the *Markman* hearing, the Defendants previewed this issue for the Court. There, the Defendants noted that TQ Delta appeared to “point to something that specifies a *minimum* number of bytes” rather than a *maximum* number of bytes. Ex. A at 86:22–23. In response, TQ Delta acknowledged the error of taking such a position, noting that if it were to take such a position, “[TQ Delta] would be in a bad position.” *Id.* at 88:10–22. Even further, TQ Delta reasoned that if the issue

is binary—which, as will be explained below, it clearly is—then “that’s a summary judgment issue.”

*Id.* at 89:8–13. This issue is now ripe for resolution at summary judgment as TQ Delta is indisputably accusing a minimum of being a maximum.

**A. It Is Undisputed That TQ Delta Points to the “max\_delay\_octet” Message Field, Which Discloses a Minimum Number of Bytes Required by the Deinterleaver Rather Than a Maximum Number of Bytes That Can Be Allocated to the Deinterleaver.**

TQ Delta, Broadcom, and CommScope all agree that the message field relied on by TQ Delta, the *max\_delay\_octet* field, specifies a *minimum* number of bytes of memory required by a deinterleaver rather than the *maximum* number of bytes that can be allocated to a deinterleaver. Because that fact is undisputed, no genuine issue of material fact can exist.

**1. TQ Delta admits that the *max\_delay\_octet* field corresponds to a minimum number of bytes required by the deinterleaver.**

In his expert report, Dr. Cooklev unambiguously states that the *max\_delay\_octet* fields within the O-PMS message correspond to the *minimum* amount of memory required by the deinterleaver, rather than the *maximum*: “The **minimum** amount of memory required in a transceiver . . . is MAXDELAYOCTET  
2 octets.” Ex. D ¶ 207 (emphasis added). This admission by Dr. Cooklev is technically accurate. The accused functionalities in the CommScope products relate to storing data temporarily in memory to account for a delay; the longer the delay is, the more data the memory needs to be able to store. Ex. H ¶ 157. Thus, defining the maximum delay that the system has corresponds, in turn, to the minimum amount of memory necessary to store the delayed data. *Id.* Dr. Cooklev’s admission in ¶ 207 is thus technically accurate insofar as the *max\_delay\_octet* field, when divided by two, indicates the “minimum amount of memory required in a transceiver” for the deinterleaver. Ex. D ¶ 207.

TQ Delta and Dr. Cooklev attempt to confuse the issue by pointing to the fact that the field *max\_delay\_octet* includes the abbreviation “max.” *Id.* ¶¶1178–79, 1201. But just because the term

“max” appears in the field name of a variable (with respect to delay) does not mean that it is a “maximum number of bytes of memory that are available to be allocated to a deinterleaver.” To the contrary, as Dr. Cooklev admits (perhaps unintentionally), this field actually corresponds to a *minimum* number of bytes of memory required by the deinterleaver.

After identifying the “max\_delay\_octet” field, Dr. Cooklev opines that this field specifies the maximum value of delay\_octet<sub>DS,0</sub>, and that “delay\_octet<sub>DS,0</sub> is the end-to-end delay.” *Id.* ¶ 1180. He explains that the maximum value of delay\_octet<sub>DS,0</sub> “is the maximum amount of delay the system will allow.” *Id.* ¶ 1181. In other words, Dr. Cooklev does **not** assert that this field is the maximum number of bytes of memory *that are available to be allocated to the deinterleaver*. Rather, he states that this field is merely the maximum amount of *delay* the system will allow—which is true.

And, as explained above, this delay actually corresponds to the *minimum* memory required by the deinterleaver. In fact, Dr. Cooklev admitted as much in his background section—nearly one-thousand paragraphs earlier—when he stated that setting the memory to  $\frac{\maxdelayoctetDS0}{2}$  is actually setting it to the *minimum* amount of memory. *Id.* ¶ 207 (“The minimum amount of memory required in a transceiver . . . is  $\frac{\text{MAXDELAYOCTET}}{2}$  octets.”). Dr. Cooklev’s admission was not an error. Indeed, Dr. Cooklev quoted directly from the VDSL2 standard, which states:

The minimum amount of memory required in a transceiver (VTU-O or VTU-R) to meet this requirement is  $\frac{\text{MAXDELAYOCTET}}{2}$  octets. The actual amount of memory used is implementation specific.

Ex. E (VDSL2) at TQD\_TX00153758. In fact, nowhere does the VDSL2 specification ever indicate any parameter that might meet the “maximum” limitation required by the Family 3 Asserted Claims.

Dr. Cooklev’s own opinions and the unambiguous contents of the VDSL2 standard establish that the message field relied on by TQ Delta for purposes of infringement does not meet the limitation requiring that the message specify a *maximum* number of bytes of memory of a deinterleaver. To the

contrary, it discloses a *minimum* amount of memory required by a deinterleaver. No reasonable juror could find that a minimum amount of memory meets a claim requirement of a maximum amount of memory. TQ Delta thus finds itself in the “bad position” it foreshadowed at the *Markman* hearing, and summary judgment is appropriate. Ex. A at 88:10–22.

**2. Third-party testimony supports the undisputed fact that the max\_delay\_octet field discloses a minimum number of bytes required by the deinterleaver.**

Dr. Cooklev’s opinions are unambiguous and are sufficient to warrant summary judgment. Nonetheless, it is notable that Dr. Cooklev’s admission regarding the relationship between max\_delay\_octet and the “minimum amount of memory” is consistent with the testimony of third-party subject matter experts. Specifically, two Broadcom witnesses—Dr. Yu and Mr. Cassiers—provided consistent testimony regarding [REDACTED]

[REDACTED] When asked about the max\_delay\_octet field, Dr. Yu explained that the [REDACTED] Ex. F (Yu Depo.) at 263:10–265:5. Mr. Cassiers likewise explained that [REDACTED]

[REDACTED] Ex. G (Cassiers Depo.) at 157:16–21. [REDACTED]

[REDACTED].

Dr. Yu and Mr. Cassiers also explained that [REDACTED]

[REDACTED]. Ex. F. at 264:23–265:5 ([REDACTED]

[REDACTED]); Ex. G at 151:18–22 ([REDACTED]

[REDACTED]); Ex. G at 166:25–167:3 (“[REDACTED]

[REDACTED].”). In other words, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**3. CommScope's testimony supports that the max\_delay\_octet field discloses a minimum number of bytes required by the deinterleaver.**

Dr. Ransom, CommScope's technical expert, likewise explained that max\_delay\_octet is merely the "maximum allowed end-to-end delay," Ex. H ¶ 152, and that "the minimum amount of memory" required "to meet each of the delay\_octet values is half of the specified delay," *id.* ¶ 157; *see also id.* ¶ 158. In fact, Dr. Ransom cites the same portion of the standard that Dr. Cooklev cited in his report, only with additional emphasis:

The minimum amount of memory required in a transceiver (VTU-O or VTU-R) to meet this requirement is  $\frac{\text{MAXDELAYOCTET}}{2}$  octets. The actual amount of memory used is implementation specific.

*Id.* ¶ 162 (emphasis in original). Dr. Ransom thus unequivocally opines that the max\_delay\_octet field corresponds to the minimum amount of memory required by the deinterleaver.

Because TQ Delta's and CommScope's experts, [REDACTED]

[REDACTED], all agree on the function of the max\_delay\_octet field, TQ Delta cannot reasonably argue that there exists any genuine dispute of material fact as to this point.

**B. A Message That Specifies a Minimum Is Not the Same as a Message That Specifies a Maximum.**

TQ Delta cannot reasonably contest that a minimum is not a maximum. Indeed, a message that specifies the maximum number of bytes of memory available to be allocated to a deinterleaver has only an upper bound, whereby no amount of memory above that maximum can be allocated. On the other hand, a message that specifies the minimum number of bytes of memory required to be allocated to a deinterleaver has only a lower bound, whereby no amount of memory below the minimum can be allocated.

Here, [REDACTED]

[REDACTED]. If the message specified an upper bound, [REDACTED]  
[REDACTED]. And even if the actual allocation of memory did happen to correspond to this theoretical minimum amount of memory [REDACTED]  
[REDACTED] the message would still not be a message that specifies a *maximum* number of bytes that can be allocated because it remains unbounded.

As no dispute of material fact exists, and because the Accused CommScope products do not meet every limitation of the Family 3 Asserted Claims, summary judgment of non-infringement is appropriate.

## **VI. CONCLUSION**

For the reasons set forth above, CommScope respectfully requests summary judgment of non-infringement of the Family 3 Asserted Claims.

Dated this 14th day of December, 2022

Respectfully submitted,

By: /s/ Eric H. Findlay  
Eric H. Findlay  
State Bar No. 00789886  
Brian Craft  
State Bar No. 04972020  
FINDLAY CRAFT, P.C.  
7270 Crosswater Avenue, Suite B  
Tyler, TX 75703  
903-534-1100 (t)  
903-534-1137 (f)  
efindlay@findlaycraft.com  
bcraft@findlaycraft.com

Douglas J. Kline  
Lana S. Shiferman  
Christie Larochelle  
GOODWIN PROCTER LLP  
100 Northern Avenue  
Boston, MA 02210  
P: (617) 570-1000  
F: (617) 523-1231  
dkline@goodwinlaw.com  
lshiferman@goodwinlaw.com  
clarochelle@goodwinlaw.com

Brett Schuman  
Rachel M. Walsh  
GOODWIN PROCTER LLP  
Three Embarcadero Center, 28th Floor  
San Francisco, CA 94111  
P: (415) 733-6000  
F: (415) 677-9041  
bschuman@goodwinlaw.com  
rwalsh@goodwinlaw.com

Andrew Ong  
GOODWIN PROCTER LLP  
601 Marshall St.  
Redwood City, CA 94063  
P: (650) 752-3100  
F: (650) 853-1038  
aong@goodwinlaw.com

Ross R. Barton (NC Bar No. 37179)  
M. Scott Stevens (NC Bar No. 37828)

[REDACTED]

Kirk T. Bradley (NC Bar No. 26490)  
Stephen R. Lareau (NC Bar No. 42992)  
Karlee N. Wroblewski (NC Bar No. 55043)  
Nicholas C. Marais (NC Bar No. 53533)  
Erin Beaton (NC Bar No. 59594)  
Mary I. Riolo (NC Bar No. 59644)  
ALSTON & BIRD LLP  
101 S. Tryon Street, Suite 4000  
Charlotte, NC 28280-4000  
Email: *ross.barton@alston.com*  
*scott.stevens@alston.com*  
*kirk.bradley@alston.com*  
*stephen.lareau@alston.com*  
*karlee.wroblewski@alston.com*  
*nic.marais@alston.com*  
*erin.beaton@alston.com*  
*mary.riolo@alston.com*  
Telephone: 704-444-1000  
Facsimile: 704-444-1111

Katherine G. Rubschlager (Cal. Bar No. 328100)  
ALSTON & BIRD LLP  
1950 University Avenue, Suite 430  
East Palo Alto, CA 94303  
Email: *katherine.rubschlager @alston.com*  
Telephone: 650-838-2004  
Facsimile: 650-838-2001

*Attorneys for Defendants*  
*CommScope Holding Company, Inc,*  
*CommScope Inc., ARRIS International*  
*Limited, ARRIS Global Ltd., ARRIS US*  
*Holdings, Inc., ARRIS Solutions, Inc., ARRIS*  
*Technology, Inc., and ARRIS Enterprises, LLC*

**CERTIFICATE OF SERVICE**

Pursuant to Local Rule CV-5(c), the undersigned hereby certifies that all counsel of record who have consented to electronic service are being served with a copy of this document via electronic mail on December 14, 2022.

/s/ Eric H. Findlay  
Eric H. Findlay